

Under surface. Calcaneum.

Calcaneal tuberosity

medial - att. of Abductor Hallucis.

lateral - Abductor $\frac{v}{v}$ Digiti

medial & lateral - Flexor digitorum brevis.

front

- long plantar lig.

(Flexor Accessorius
Quadratus Plantae).

- either side of plantar lig.

Navicular.

- concave - post. for head of talus

- art. ant. with all 3 cuneiforms
has tuberosity on medial side
- insertion of Tibialis Post.

Cuboid.

- art. behind with calcaneum.

in front 4th & 5th of metatarsals.

- prone on under surface for
tendon of peroneus longus

- Tibialis post.

- Flexor hallucis longus. brevis.

Cuneiforms.

1st. medial Tibialis ante. (medial)

Peroneus longus. (lateral)

2nd. middle Tibialis Post.

3rd. lateral Tibialis Post.

Flexor hallucis brevis.

● Metatarsals.

- size of 1st.
- length of 2nd.
- tuberosity at base of 5th.

Applied Anatomy.

Fractures of tarsals, when person falls from ht. Calcaneum comminuted, & flat foot developed.

Fractures of metatarsals frequent.

Vitellus ant.

Palpable throughout, tendon crosses ankle. Dorsal is flexion of foot with inversion.

Acts as sling in maintaining long arch of foot.

Extensor digitorum longus.

See tendons on dorsum of foot.

Extends 4 lesser toes (acting principally on metatarso-phalangeal jt).

Dorsi - flex ankle (helps)

Extensor hallucis longus.

Extends great toe

Much dorsi - flex of foot.

Peroneus tertius.

Difficult to find - tendon through
shaft of 5th metatarsal.
Dorsi flex + evrts foot.

Int. muscles.

Peroneus longus.

Big muscle belly + tendon on
side of leg.
Plantar flexion with eversion.
Maintains transverse + lateral arch.

Peroneus brevis.

Under *P. longus*.
Sometimes feel tendon.
Evrt foot + lifts lateral border.

Post. muscles.

<i>Gastrocnemius</i>	- palpable.	Plantar flex
<i>Soleus</i>	- palpable.	ankle by
<i>Plantaris</i>	- impalpable.	achilles muscles

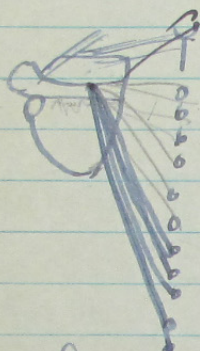
Gastrocnemius - flexes knees.
- acts with resistance - body wt.

Flexor digitorum longus.

- Hard to find
- flexes 4 distal toes
- power to extend ankle.
- in position to evrt foot

Spine.

- $\frac{1}{2}$ way down vert. border.
- Δ apex of spine.
- rises laterally + flattens to acromion process.
- muscles attach to upper border + acromion
 - Trapezius.
 - concentrates on superior border.
 - to lower border.
 - Origin of deltoid



Acromion overlaps humerus head.

- separate bony process.
- tuberosities for concentration of fibres from deltoid.
- articular facet for clavicle.

Tip of acromion - craco-acromion ligament

Coracoid process.

- flared + out from superior border
- from tip - craco-brachialis
- long head of biceps.
- to side - pectoralis minor

from upper border.

- craco-clavicular ligament

Applied Anatomy.

- fractures of body infrequent.
- fracture of acromion frequent.
- union fibrous.

Clavicle.

- long bone - fulcrum for arm.
- shoulder girdle - clavicle + scapula.
- junction of sh. girdle with trunk at sternum.
- medial $\frac{2}{3}$ - convex forward.
- outer $\frac{1}{3}$ - concave forward.
- first bone to ossify.

lateral $\frac{1}{3}$ - anterior border

- part of deltoid (origin)

posterior border

- trapezius (insertion)

Under - conoid tubercle.

- ridge from it - (trapezoid ridge)
- conoid ligament
- trapezoid ligament

coraco - clavicular ligament.

Medial $\frac{2}{3}$ - 3 sided.

upper (anterior border)

- pect. major (origin)

posterior border.

- sterno - cleido - mastoid.

Under-under - humerus.

- rhomboid costo - clavicular.

Delta - pectoral Δ .

- sub-clavicular - 1st rib.

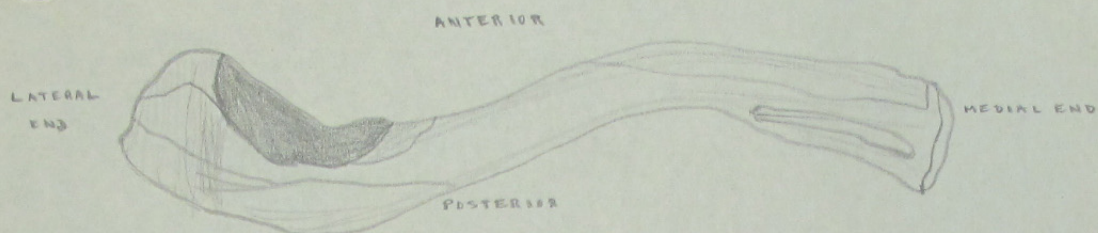
- groove on under surface.

Extremities - medial -

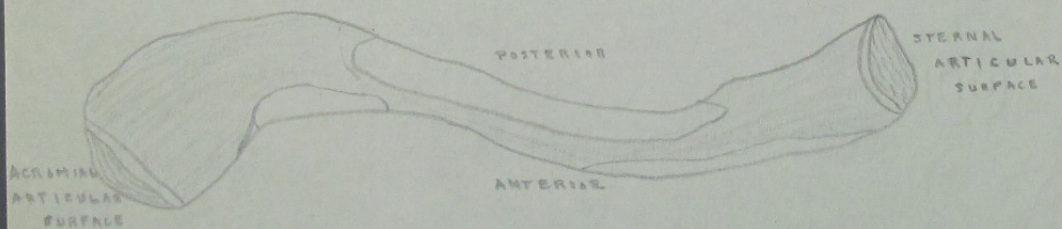
- Δ in form.

- covered with cart. with artic. with sternum + 1st rib.

SUPERIOR ASPECT OF LEFT CLAVICLE



INFERIOR ASPECT OF LEFT CLAVICLE



● Support of arms, reclines out.
(dyspnoea). Quiet inspiration -
1st + 2nd ribs fixed - 11th + 12th ✓
fixed - other ribs elevated -
To increase antero - post. + transverse
diameter of thorax -

Vertical diaphragm of thorax is
increased by descent of diaphragm.
Expiration is elastic recoil of
thoracic walls + tonic action of
abd. muscles.
On deep inspiration.

Diaphragm - dropping down +
increases vertical angle.

Inter-costal - maintaining proper
space between ribs -
- inter-costal space.

Trapezius - scapula lifts - head goes back

Scaleni - lift chest.

S-C-M - lifts clavicle.

Pectorals - Minor - move.

Serratus - ant. - pulls ribs laterally.

Sacro-spiralis - arches back

1st r. + sternum raised by muscles
of neck. Trapezius raised shoulder,
takes out of upper extremity from

Phoebe Hamilton
Lesser pectoralis . 99 St. George St 888.

Thorax . Head drawn back -
Thoracic curve decreased .

Forced expiration . - coughing , laughing ,
Abdominals .

Diaphragm - 1" - respiration
3" - forced respiration .

Neck Muscles .

Sternocleidomastoid . 2 heads .
O - 1) head from manubrium of sternum .
2) sup . border of med . $\frac{1}{3}$ of
clavicle .

Insert - mastoid process of temp . bone .
- lat . part of sup . nuchal line .

Action .

single bends head to same side &

double rotates it to opposite side .

single - flexes neck , bends head forward .

- if head flexes , moves in deep
inspiration .

Platysma .

- sheet of muscle beneath skin .

- fascia of chest to face .

ant . part of neck

supra + infra hyoid .

● Anterior-vertebral muscles.

- front.

Longus Colli.

O + I. - 3rd. thoracic to Atlas. (1st. cervical.)

A. - flexes cervical vert. neck with side bending, & slight rotation.

Longus Capitis.

O - upper cervical vert.

I. - Annular part of occipital bone.

A. - flexes head.

Rectus Capitis Anterior

Atlas +

Rectus Capitis Lateralis

occipital bone.

A. - nods head

● Lateral vertebral muscles.

Scalenus Anterior.

Scalenus Medius

Scalenus Posterior.

Scalenus Ant.

O - ant. tubercles of transverse processes of 3, 4, 5, 6 cervicals.

I - scalene tubercle of 1st. rib - elevates

Scalenus Medius. biggest.

O - post. tubercles of 2, 3, 4, 5, 6.

I - upper surface of 1st. rib. post. to scalenus ant. - elevates.

Scalenus Post.

O - post. tubercles of 4, 5, 6. behind medius.

I - 2nd. rib. - elevates

Actini - bend neck sideways.
in deep inspiration elevate
1st + 2nd ribs.

Post. Vertebral Muscles.

from Atlas, Axis, Occipital bone.

Actini - Extension of head.
Side bending of neck.

Abdominals.

Muscles of abdominal wall.

Obliquus Externus . Rotates opp side .

O - lower 8 ribs .

- ant. part of crest of ilium - ^{linea} alba

Actini - Single - rotates trunk opposite side.

Double - compression or flexion of
trunk - expulsion

Obliquus Internus .

O - inguinal lig.

ant. $\frac{2}{3}$ crest of ilium .

lumbo - dorsal fascia .

O - linea alba, last 3 ribs, pubic crest .

Single - Rotates to same side .

Double - Flexion, expulsion, compression .

Transversus.

O - 5 lower ribs .

iliac crest, inguinal lig .

I - linea alba, pubic crest .

Actini - Compression, expulsion .

Increases abd. pressure .



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